

White Nose Syndrome Frequently Asked Questions

Adapted from U.S. Fish and Wildlife Service Information

1. What is white-nose syndrome?

Hibernating bats in the northeastern United States are dying in record numbers, attributed to an affliction called white-nose syndrome. It is named for the white fungus on the muzzles and wings of affected bats. WNS was first documented at four sites in eastern New York in the winter of 2006-07, and has rapidly spread to multiple sites throughout the northeast.

Some researchers associate WNS with a newly identified fungus (*Geomyces destructans*) that thrives in the cold and humid conditions characteristic of the caves and mines used by bats. The fungus could be responsible for the bat deaths, or it could be secondary to the cause. Bats affected with WNS do not always have obvious fungal growth, but they may display abnormal behavior within and outside of their hibernacula (caves and mines where bats hibernate during the winter).

2. How is WNS transmitted?

The U.S. Fish and Wildlife Service believes WNS is transmitted primarily from bat to bat. There is a strong possibility that it may also be transmitted by humans inadvertently carrying a causative agent from cave to cave on their clothing and gear, which is why the state of Tennessee has agreed to temporarily close caves to protect the resource.

3. Does WNS pose a risk to human health?

Thousands of people have visited affected caves and mines since WNS was first observed, and there have been no reported illnesses attributable to WNS. WNS is still being studied, but there have been no indications of risk to humans from contact with WNS-affected bats. However, it is a good idea to take precautions and not expose yourself unnecessarily to WNS. Biologists and researchers use protective clothing when entering caves or handling bats in affected states and follow specific and evolving decontamination protocols to protect the bats.

4. Where has WNS been observed?

Biologists and/or cavers have documented WNS in bat hibernacula in New Hampshire, Vermont, New York, Massachusetts, Connecticut, New Jersey, Pennsylvania, West Virginia and Virginia. The list of states is expected to increase over time.

5. If Tennessee caves have not been affected, why close them?

WNS has spread quickly and has recently been found in Virginia and West Virginia. It is moving closer and closer to Tennessee. The U.S. Fish and Wildlife Service has requested affected states and neighboring states close their caves at this time. Tennessee borders Virginia and has hibernacula that are key to the survival and recovery of two federally listed species, gray and Indiana bats. There is concern that due to their long migration distances, they may quickly move WNS from roost to roost. Tennessee has agreed to close caves for one year as a precaution to protect the species and then reassess the situation.

6. Are there any exceptions to Tennessee cave closures?

Dunbar Cave at Dunbar Cave State Park hosts a number of public tours organized by the park and will stay open. The bat population at Dunbar Cave is small due, in part, to a past fire.

7. What is the response if someone enters a Tennessee cave after it's closed?

State agencies and The Nature Conservancy are hopeful that education and information sharing will be enough. The law allows for citations with monetary penalties, however, should that become necessary.

8. What are signs of WNS?

Bats may lose their fat reserves, which they need to survive hibernation, long before the winter is over. They often leave their hibernacula during the winter and die. As winter progresses, we find increasing numbers of dead bats in the affected locations. WNS may be associated with some or all of the following unusual bat behavior:

- White fungus, especially on the bat's nose, but also on the wings, ears or tail;
- Bats flying outside during the day in temperatures at or below freezing;
- Bats clustered near the entrance of hibernacula; and
- Dead or dying bats on the ground or on buildings, trees or other structures.

Hibernating bats may have other white fungus not associated with WNS. If a bat with fungus is not in an affected area and has no other signs of WNS, it may not have WNS.

9. What should you do if you find dead or dying bats in winter or early spring, or if you observe bats with signs of WNS?

- Contact the Tennessee Wildlife Resources Agency at 615-781-6619 or e-mail U.S. Fish and Wildlife Service biologists at WhiteNoseBats@fws.gov to report your potential WNS observations.
- It is important to determine the species of bat in case it is a federally protected species. Photograph the potentially affected bats (including close-up shots if possible) and send the photograph and a report to your contact (above).
- If you need to dispose of a dead bat found on your property, pick it up with a plastic bag over your hand or use disposable gloves. Place both the bat and the bag into another plastic bag, spray with disinfectant, close the bag securely, and dispose of it with your garbage. Thoroughly wash your hands and any clothing that comes into contact with the bat.
- If you see a band on the wing or a small device with an antenna on the back of a bat (living or dead), contact TWRA or your nearest Fish and Wildlife Service field office as these are tools for biologists to identify individual bats.

10. What species of bats are affected?

Eastern pipistrelle, little brown, northern long-eared, big brown, small-footed and Indiana bats have died from WNS. Big brown bats are typically found in lower numbers in the affected sites, and few have been found with the signs of WNS.

11. What is being done to find the cause and a cure for WNS?

An extensive network of state and federal agencies, particularly in areas where WNS has been found, is working to investigate the source, spread and cause of bat deaths associated with WNS and to develop management strategies to minimize the impacts of WNS. The overall WNS investigation led by the U.S. Fish and Wildlife Service has three primary focus areas: research, monitoring/management and outreach. For example, The U.S. Fish and Wildlife service is conducting winter surveys to document and track affected sites, working with the caving community and local cave owners to target potential sites for surveys and protective measures, and securing funding to identify and fund research on the spread and management of WNS. In addition, the Service has a Web page as a central repository for up-to-date information and links to other relevant Web sites.

The state of Tennessee and The Nature Conservancy are working to prevent WNS from spreading by temporarily closing cave access.

12. What should cavers know and do?

The U.S. Fish and Wildlife Service and the states request that cavers observe all cave closures and advisories and avoid caves, mines or passages containing hibernating bats to minimize disturbance to the bats. The Service asks that cavers and cave visitors stay out of all caves in the affected states and adjoining states to help slow the potential spread of WNS. Local and national cave groups have also posted information and cave advisories on their Web sites.

13. What is the effect of WNS on bats?

Some 500,000 bats have died from WNS, and there seems to be no end in sight. There has been a 90 to 100 percent mortality of bats (primarily little brown bats) at several hibernacula in New York, Massachusetts, Connecticut and Vermont. However, there may be differences in mortality by site and by species within sites. The endangered Indiana bat hibernates in many of the affected sites. The U.S. Fish and Wildlife Service is closely monitoring Indiana bat populations in many hibernacula and, to the extent possible, in their summer maternity colonies.

In New York and New England, winter counts of Indiana bats have declined, likely as a result of WNS. During the winter of 2008-2009 the Fish and Wildlife Service conducted its biennial rangewide winter counts of Indiana bats. Early results from New York report significantly fewer bats. In addition to the Indiana bat, WNS has reached sites that contain the endangered Virginia big-eared bat. While no Virginia big-eared bats have exhibited signs of WNS yet, the Service is closely monitoring this species.

14. Where can I get more information about White Nose Syndrome and Tennessee cave closures?

The U.S. Fish and Wildlife Service has a Web site dedicated to WNS at www.fws.gov/northeast/white_nose.html. Or you can call 800-344-WILD (800-877-8339 for the deaf) or email WhiteNoseBats@fws.gov.

Updates regarding Tennessee cave closures will be posted on the land management agencies' and The Nature Conservancy's Web sites:

Tennessee State Parks: www.tnstateparks.com

Tennessee Department of Agriculture: www.tn.gov/agriculture

Tennessee Wildlife Resources Agency: www.tn.gov/twra

The Nature Conservancy in Tennessee:

<http://www.nature.org/wherewework/northamerica/states/tennessee/>